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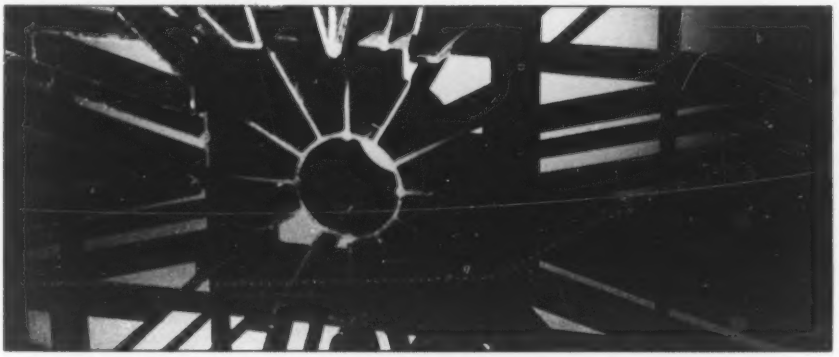
Research & Development

The magazine with the **R100 Awards**

Chemical analysis assures performance. **See p 85.**



EDITORIAL

11 The Editorial Statement

DEPARTMENTS

25 Innovative Notebook
29 Product Development
35 R&D Business
41 Research Trendletter
45 R/D News in Brief
173 Vacuum Technology
193 New Products
213 R&D Product Center
217 Literature
236 Bookshelf
238 Opinion Poll Results
241 Letters
248 Advertisers Index
251 Reader Service Card

ABOUT THE COVER

A space-age "spiderweb" made of foamable plastic forms the base of a pallet designed for shipping heavy aircraft-engine parts. A team from General Electric's R&D Center, Schenectady, NY, and the Plastics Group, Pittsfield, MA, developed a CAD/CAE software package that was used to produce the design.

To take full advantage of the software, the foamable plastic must be uniform from batch to batch. Chemical analysis of raw materials and finished foamable liquids, as well as mechanical testing of the solidified structural foam, can assure that the manufactured parts will perform as they should every time.

A story about GE's program for the development and design of foamed-plastic parts is on p 85.

NEWS

53 Space: Will there be a military presence on the space station?; research at center will focus on energetic materials

54 Electronics: Method could cut IC testing cost; large quasicrystals show uniqueness

55 Engineering: 'U.S. needs to change the way it educates engineers'; MIT looks into more social studies; book lists research opportunities for women; defense industry balances engineering employment

58 Pulsed power: Soviet advances in pulsed power R&D surprise Western nations

60 Lasers: Israeli researchers build powerful solar laser

62 Millimeter wave technology: Bright future for millimeter wave technology

66 Energy & power: Advanced technologies will play a growing role in energy generation; method eliminates NO_x from diesel exhaust; progress reported on two fuel cell concepts; strong interest expected in biotech center; electrical storage with superconductors explored; MIDnet to improve supercomputer access

79 Technology export: U.S. steps up efforts to restrict technical data-base access

82 Communications: Expres to make NSF proposal process totally electronic; technique measures large molecule mass

85 Awards: Last call for *I•R 100* entries

85 Software: Program cuts design time of plastic foam parts

86 Data processing: Scanning system provides speed and functionality

86 Materials: Researchers synthesize boron nitride by pyrolysis; NSF software center

93 Special Report—Astronomy
Instrument improvements and ambitious projects could lead the way to a new understanding of the cosmos

ARTICLES

102 TREELS can follow changes on surfaces: H.L. Thomas, senior associate editor, *R&D*.

107 Bigger and better: the Pittsburgh Conference for 1987: R.R. Jones, editor.

112 Go 'Forth' to control your spectrometer: Elizabeth Rather, FORTH.

116 Choose the best catalyst for your reaction: H.L. Thomas, senior associate editor, *R&D*.

122 How do you know how hot it really is? A.S. Tenney, Leeds & Northrup.

128 Waveform digitizers capture those fleeting signals: Roger Loop, Tektronix.

134 You don't have to touch an object to see how hot it is: K. Irani, Mikron Instrument Co.

140 You can find treasure hidden in the trash: J.C. Wright, Nicolet Instruments.

146 Elementary particles or whirlpools in space? William VanDeusen.

154 Look at the whole system for R&D data: Stephen Lekas, Keithley Instruments.

160 Energy storage systems let utilities level loads: Thomas York, EPRI.

166 Lab safety can depend on proper hood selection: A. Delli Paoli, Abbott Labs, and G.T. Saunders, consultant.

173 Cathodic arc deposition advances coating technology: H. Randawa and P.C. Johnson, Vac-Tec Systems Inc.

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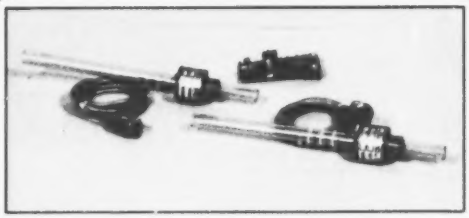

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OPINION POLL RESULTS

Readers ask extensive review of nuclear reactor safety

READERS of this magazine favor an extensive review of nuclear reactor safety before any new reactors are started, if the more than 2,000 who responded to our Opinion Poll survey are typical.

Nearly half of the respondents acknowledged losing some or all of their enthusiasm for nuclear power following the Chernobyl incident.

How close a respondent lives to a nuclear power plant did not seem to affect response patterns except for those living within five miles of a reactor. Their answers appear to reflect a stronger support for nuclear power. Their answers to **No. 1** were: a. 28%, b. 47, c. 6, d. 15, e. 4. To **No. 2**: a. 22%, b. 11, c. 6, d. 61; **No. 4**: a. 28%, b. 65, c. 7; **No. 5**: a. 55%, b. 41, c. 4; **No. 8**: a. 69%, b. 31.

Also, those who don't know how near they live to a nuclear power plant are less aware than others of fail-safe reactor designs, answering **No. 8**: a. 43%, b. 57.

Responses for all respondents follow:

1. *Would you say that* before *the Chernobyl event your feelings about nuclear power made you . . .*
   a. An enthusiast 15% d. A detractor 10%
   b. A supporter 52 e. An opponent 7
   c. Neutral 16
2. *Has what you know about the event at Chernobyl reduced your enthusiasm for nuclear power . . .*
   a. A little 31% c. Completely 5%
   b. A lot 12 d. Not at all 52
3. *Do you believe that this event will have a lasting negative effect on the use of nuclear power?*
   a. Yes 59% b. No 37% c. No opinion 4%
4. *Do you believe that this event will hasten the swing to non-nuclear energy sources?*
   a. Yes 39% b. No 54% c. No opinion 7%
5. *Do you believe that all nations, including the U.S., need extensive review of their nuclear safety provisions before committing to build new reactors?*
   a. Yes 72% b. No 24% c. No opinion 4%
6. *Do you believe that the Chernobyl event will damage Russian credibility in the world?*
   a. Yes 65% b. No 30% c. No opinion 5%
7. *Do you believe that the event will set back the efforts of Mikhail Gorbachev to present Russia as a leading technology nation?*
   a. Yes 59% b. No 33% c. No opinion 8%
8. *Are you aware of the existence of fail-safe reactor designs that would simplify the construction and reduce the costs and hazards associated with nuclear power plants?*
   a. Yes 52% b. No 48%
9. *How close do you live to a nuclear power reactor?*
   a. Within 5 miles 3% d. Within 100 miles 25%
   b. Within 25 miles 18 e. More than 100 miles 21
   c. Within 50 miles 28 f. Don't know 5